

To the issue of transformation of ‘old industrial area’ geobrand through example of Sverdlovsk Region

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Abstract. The authors of the article present the results of theoretical and methodological review of term ‘old industrial area’, in the result of which its features and identical problems of functioning were identified. Similarity of such regions is demonstrated in correlation of economic downfall with level of social strain; difficulty of industrial fields transformation; disinclination to accessibility of innovations; imperfection of financial institutions and problems of industrial heritage valorization. Transformation of ‘old industrial area’ is considered through example of Sverdlovsk Region. The authors defined several directions of its implementation and explained geotransformation of the considered region from a historically developed image of a ‘state stronghold’ to the image of developing region with modern capital acquiring features of international metropolitan city. The article describes formation of new dynamically developing image of ‘capital area’ for Sverdlovsk Region having innovative path of evolution in terms of ability to engage young people both from different parts of Russia and various countries. Taking into account a number of facts it is also the evidence that intensification of trend of migration to the capital of Sverdlovsk Region for educational reasons is directly related to its image of a big city.

1. Theoretical analysis of term ‘old industrial area’

The term ‘old industrial area’ came into use in 1970-s [1] and was subjected to insignificant development. Thus, for example, in the work of J Carney, R Hudson, J Lewis dated 1980 the old industrial area is understood as a region with industrial field prevailing in economy [2].

M Steiner in the work dated 1984 defined the old industrial area as a struggling region, economic basis of which was formed in the last century by a small number of developed sectors (metallurgy, extraction of commercial minerals, textile industry), and then was being developed for more than one hundred years, but now is suffering from recession [3].

A Granberg, S Artobolevsky, G Kovaleva defined the old industrial area in 1998 as a territory having specialized fields that lost the target market, became unprofitable or stopped the manufacturing activity or are at the stagnation stage due to scientific and technical progress [4].

L Sakharova determined in the work dated 2003 that the old industrial area is a region, manufacturing facilities of which require renovation, therefore economy of such areas (regions) suffer from the increase forcing out the domestic products incapable to compete by price and quality with the similar imported ones.



In 2004 M Trippel defined the scope of the old industrial area as a territory where education of people and innovative solutions under condition of economic reality modernization do not have the expected effect and do not establish a connection of material prosperity of the region with a level of its innovative activity. F Tödtling also noted that the highly specialized technological innovations prevailing over development and introduction of new products under conditions of low diversification of business activity are peculiar for these regions [5].

K Glonti insisted in the series of works dated 2008 that the old industrial area is a territory with technologically obsolescent industry due to change of technological paradigms and passing of time [6].

S Litovchenko suggested in 2014 to understand the old industrial area as a territorial entity social and economic development of which is based on a historically developed concentration of industry corresponding to 3rd-4th technological paradigm. Herewith the region has a potential of further innovative development [7].

N Sorokina, Yu Latov determined in 2016 that the old industrial area is a constituent entity of the Russian Federation comprising highly specialized industrial fields connected with passing technological paradigms [8].

Thus, one can say that regardless of long-time usage of the term 'old industrial area' it has no unambiguous rendering, so it is reasonable to distinguish specific methodological aspects of such territories.

2. Methodological aspects of old industrial areas

Russian old industrial areas have similar methodological aspects. Firstly, it is an established fact that correlation of economic downfall with level of social strain that may either appear during active searching of solutions for existing social problems (in regard to employment, advance in living standards, raising of qualification, etc.) or take such determining forms as industrial actions, hunger strikes, rallies, protests due to negative assessments of government work of federal, regional and municipal level. Thus, research performed by the scientific body of employees of the Institute of Economics of the Ural Branch of Russian Academy of Sciences under supervision of member of the Russian Academy Sciences A I Tatarkin through example of public opinion polls of 4 municipal units within Perm Krai including the following towns: Kizel, Gubakha, Greymachinsk, and Chusovoy determined that the social strain on its territory during abandonment of mines in the Kizel coal basin in the end of 2000-s was induced by anxiety related to price increase (72.4 %), unemployment (34.8 %), increase in crime (28 %), arbitrariness of officials (19.0 %), inefficiency of local government activity (18.1 %), poor housing conditions (16.7 %), etc. Scientists who conducted this research concluded that the local society needs formation of social attitudes and new system of thoughts regarding the exercised transformations and social and economic perspective of the region. This should help to overcome a social apathy, as well as to form pro-active attitude. In addition, independent solving of local problems through participation of active population in making of decisions and implementation of management standards of local businesses shall be the core value for local society.

Secondly, all old industrial areas include difficulties of industrial field transformation with structural irresponsiveness to modern development conditions. Development of the industrial fields that are new for the territory ensuring stable diversification of territory economy serves as a solution here. Extension of the service industry is another option to be used in the regions.

Thirdly, old industrial area is characterized by imperfection of innovation support system that may be solved within two approaches. The first approach is related to management of innovative development oriented at attraction of high-tech enterprises into the regional economy that are mainly engaged in service provision in order to create the necessary infrastructure and favorable conditions for development of such activity [9]. The second approach is traditionally connected with management of transition from inertial development to innovative one. In case of this approach it is required to solve two tasks simultaneously: provision of necessary resource base and creation of conditions for diversification of economy. One can also mention, within the low innovativeness of the region, the

undeveloped system of higher education and concentration of universities mainly on technical professions required by the current economic industrial sector. Such situation in universities results in niche specialization of population and is an obstacle for diversification of economy. Not least important is the inability of existing system of higher education to form and increase an entrepreneurial potential of young people which also has impact on migration flows of graduates of old industrial areas.

Fourthly, imperfection of functioning of financial institutions, activity of which is inefficient even in the process of individual mobilization of available unused spare capacity of industrial facilities; modernization of the most 'narrow' local links of a technological chain restraining the production capabilities of the enterprise; reconstruction (with a large capacity gain) of the best existing enterprises; construction of new enterprises; displacement and liquidation of noncompetitive and prospectless structures.

Fifthly, industrial heritage comprising values of industrial culture, having historical, technological, social, architectural or scientific meaning is another distinctive feature of old industrial areas. This industrial heritage has appeared in the beginning of industrial revolution and continues today due to change of technological paradigms, when multiple facilities become unnecessary and do not satisfy the demands of times [10]. And the main task here is not only to preserve, but to valorize the industrial heritage as an additional source of economic development of the territory.

3. Identical problems of old industrial areas

The above methodological aspects of old industrial areas cause the following identical problems [11]:

- large fraction of heavy industry in the territory economy with low potential to deal with new forms of competition;
- low level of entrepreneurial development and lack of personnel for work in new economic sectors;
- low level of diversification of region economy;
- high level of unemployment;
- ecological problems due to lack of modernization of treatment facilities;
- narrow professional qualification of people on the region;
- large fraction of exhausted permanent assets used in manufacturing processes, as well as application of obsolete technologies;
- restricted environment of innovation and low investment attractiveness.

Thus, the old industrial area is characterized by historically developed specialization due to 3rd or 4th technological paradigm; use of obsolete past-oriented technologies; low level of academic activity of universities; necessity of innovative transformation of industrial complex; and the like. It appears that when at least one of the methodological aspects of old industrial area is changed and one cluster of the above problems is solved, then we can talk about transformation of the territory geobrand.

4. Main trends of transformation of old industrial area in Sverdlovsk Region

Taking into account the above of theoretical and methodological aspects of old industrial areas it can be said that one of the perfect examples of such territories is Sverdlovsk Region. Such its geobrand is determined by creation of general Ural mining and metallurgical center in a time of Peter I, as well as historically developed mining and metallurgical civilization firstly mentioned in the works of D Mamin-Sibiryak. Favorable intersection of trade routes and a wealth of natural resources stipulated development of industrial area. Lately Yekaterinburg transformed its image and became a capital city opened for communication relations. Transformation is demonstrated in creation of maximum advantageous innovative climate, establishment of informational and technological connections, provision of economic and environmental safety [12], design of developed infrastructure [13] complying with international standards, and certainly in cultural landscape [14] determined in particular by local architecture, one part of which is 'inherited' by the citizens and other part is being designed and constructed today 'creating' new image of the city for future generations [15]. Historical

traditions and new directions in architecture are combined in the course of development of geobrand of Yekaterinburg emphasizing the historical importance of the territory origin [16]. Interest of young people from other countries in Sverdlovsk Region is caused by geographical position of Ural dividing Europe and Asia but connecting economic interest of the West and the East, as well as different cultural and historical traditions of population. Therefore, capital characteristics of geobrand of Yekaterinburg include new touristic routes, international business, cultural and sport events. Content analysis of official mass media showed that Yekaterinburg has been mainly positioned as cultural and sport capital city since 2017. Number of publications related to development of infrastructure of the city, public health system, tourism, international cooperation in 2018 [17].

All the information mentioned above emphasizes geotransformation of Sverdlovsk Region from a historically developed image of old industrial area of the Ural ('state stronghold') to the image of developing region with modern capital acquiring features of international metropolitan city. Another feature of transformation of geobrand of the capital city of Sverdlovsk Region is the developed system of higher education represented by 39 higher education establishments, many of which occupy high places in the Russian ranking of universities in terms of the quality of educational services and the prestige of studying at them. Indices of its works show dynamics in development of the considered region, its innovative course of history and ability to engage young people both from different parts of Russia and various countries.

5. Sverdlovsk Region as 'capital area' in the content of export activity of Ural universities

We propose to review the transformation of geobrand of Sverdlovsk Region in terms of increase in export of services of Ural universities during 2016–2018. Thus, universities of Sverdlovsk Region implemented 970 contracts on internal study mode and 537 contracts on external study mode in 2016/2017 academic year making it possible for universities to gain profit from export of educational services in the amount of 151,462,435 rubles. Number of contracts on internal study mode for foreign citizens increased by 157 % in 2017/2019 academic year in comparison with the last year, thus the total amount on these contracts is 203,614,764 rubles. At the same time, number of contracts on external study mode reduced by 87 % affecting the profitability of university from export activity equal to 33,776,250 rubles in 2017/2018 academic year. The fact that regardless of different trends in export services the universities managed to increase total profitability from 151,462,435 to 237,391,014 rubles is considered as positive moment approved by motivation of foreign students to come and study in Ural universities.

In university section (see table 1) the largest profitability from export of educational services in 2017/2018 academic year has the Ural Federal University named after the first President of Russia B N Yeltsin (158 million rubles) due to internal and external study mode on a contractual basis of foreign citizens.

Table 1. Export of educational services of state universities of Sverdlovsk Region in 2017/2018 academic year [18].

University	Total quantity of foreign citizens, persons	Int. contact, persons	Amount, rubles	Ext. contact, persons	Amount, rubles
Ural Federal University	1,164	1,026	145,995,740	138	11,890,850
Ural State University of Economics	288	172	21,929,000	116	7,630,000
Ural State Mining University	215	123	12,841,676	92	5,682,330
Ural State Pedagogical University	154	121	11,109,200	33	1,917,400
Ural State Law University	131	68	9,868,400	63	4,964,400
Ural State Forest Engineering University	23	7	749,600	16	753,150
Ural State Academy of Architecture and Arts	15	7	1,121,148	8	938,120

The second place in profitability from export of educational services to foreign citizens is taken by the Ural State University of Economics (29.5 million rubles). The third place is taken by the Ural State Mining University, where education of foreign citizens provided inflow of monetary resources in amount of 18.5 million rubles. In general, universities in Sverdlovsk Region implemented 1524 contracts on internal study mode and 466 contracts on external study mode in 2017/2018 academic year exceeding amount of contracts of the last period (1507 contracts in 2016/2017 and 1990 contracts in 2017/2018). It turns out that there is an increase of number of foreign students proving the transformation of geobrand 'old industrial area' of Sverdlovsk Region to 'capital'.

In addition, it is interesting to mention the obtained results of questioning of 300 foreign students of UrFU and UrGEU aimed at determination of factors defining selection of place of studying and university. Opinions of respondents were divided as follows:

- acknowledgment of the university diploma in their country (100 % of respondents);
- interest in the region where the university is located (92 % of respondents);
- possibility of employment in the region (43 % of respondents);
- recommendations from relatives, friends, etc. (32 % of respondents).

It is particularly remarkable that the foreign students mentioned the following channels as sources of information, from which they learn about Ural universities: the Internet (97 % of respondents); FIFA World Cup (90 % of respondents); meetings with representatives of the university native country (45 % of respondents); international events in native country (45 % of respondents); international events in Yekaterinburg (60 % of respondents). That means that informational channels also show transformation of geobrand of Sverdlovsk Region.

6. Conclusions

Thus, it turns out that Sverdlovsk Region and its capital correspond to methodological aspects of 'old industrial area' on the one hand and have social and economic trends in transformations of established geobrand on the other hand. It was illustrated through example of increase of educational migration trend in Yekaterinburg due to attractive image of the Ural territory and quality of education services of universities. It also proves that the capital of Sverdlovsk Region forms new geobrand of cultural metropolis with developed infrastructure and international cooperation.

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